

**ENHANCED MEASUREMENT OF AZIMUTHAL DEPENDENCE OF  
SUBTERRANEAN PARAMETERS**

**ABSTRACT OF THE DISCLOSURE**

A method for estimating an azimuthal dependence of a parameter of a borehole using logging sensor measurements acquired as a function of azimuth of the logging sensors is provided. The method includes acquiring at least one logging sensor measurement and a corresponding azimuth from a downhole tool. The method further includes processing a convolution of the logging sensor measurement and corresponding azimuth with a predetermined window function to determine convolved logging sensor data for at least one azimuthal position. Certain embodiments of this invention may be advantageously utilized in LWD imaging applications to provide for superior image resolution and noise rejection as compared to prior art imaging techniques.